

### ABSTRACT OF THE DISCLOSURE

In a digital communication system such as a mobile radio system, fading distortion is compensated with a raised precision. In a transmitter, pilot signals are regularly inserted in the information signals. The amplitude  
5 of the pilot signals are set larger than the maximum possible amplitude of the information signals. The modulation scheme of the pilot signals may be different from that of the information signals. In a receiver, the fading distortion of each of the pilot signals is determined. The fading distortions of the information signals are estimated by interpolation using the determined  
10 fading distortion of the pilot signal, and then compensated. The frequency band of each information signal is preferably limited with a roll-off filter with a roll-off coefficient ranging from 0.1 to 0.4.